

AMENDMENTS TO THE CLAIMS

Please amend claims 92, 97, 102-112 and 136 as shown in following list of claims:

1.-91. (Canceled).

92. (Currently Amended) A plasmid comprising ~~a nucleic acid sequence selected from the group consisting of:~~

- ~~(a) the nucleic acid sequence of SEQ ID NO:1,~~
- ~~(b) the nucleic acid sequence of SEQ ID NO:3 [[,]]~~
- ~~(c) the nucleic acid sequence of SEQ ID NO:5,~~
- ~~(d) the nucleic acid sequence of SEQ ID NO:7,~~
- ~~(e) the nucleic acid sequence of SEQ ID NO:9,~~
- ~~(f) the nucleic acid sequence of SEQ ID NO:10,~~
- ~~(g) the nucleic acid sequence of SEQ ID NO:11, and~~
- ~~(h) the nucleic acid sequence of SEQ ID NO:12.~~

93. (Previously presented) The plasmid of Claim 92 wherein said plasmid is an expression vector.

94. (Previously presented) The plasmid of Claim 93 wherein said expression vector is a viral vector.

95. (Canceled).

96. (Previously presented) The plasmid of Claim 93 wherein said expression vector is a bacterial expression vector.

97. (Currently Amended) A plasmid comprising a nucleic acid sequence encoding a ~~polypeptide sequence selected from the group consisting of:~~

- ~~(a) the polypeptide sequence of SEQ ID NO:2,~~
- ~~(b) the polypeptide sequence of SEQ ID NO:4 [[,]]~~
- ~~(c) the polypeptide sequence of SEQ ID NO:6, and~~
- ~~(d) the polypeptide sequence of SEQ ID NO:8.~~

98. (Previously presented) The plasmid of Claim 97 wherein said plasmid is an expression vector.

99. (Previously presented) The plasmid of Claim 98 wherein said expression vector is a viral vector.

100. (Canceled).

101. (Previously presented) The plasmid of Claim 98 wherein said expression vector is a bacterial expression vector.

102. (Currently Amended) A plasmid comprising a coding sequence flanked on each end by a noncoding sequence, wherein the coding sequence consists of at least 8 consecutive nucleotides selected from nucleotides 1-46, 48-123; 120-369; 365-394; 390-540; 538-646; ~~643-1004~~; 1001-1080; 1083-1109; 1106-1304; 1301-1366; 1363-1386; 1389-1514; 1516-1778; 1773-1917; 1921-2010; 2051-2146; 2154-2209; 2234-2368; 2367-2422; 2420-2454; 2465-2491; 2488-2568; 2872-2901; 2902-2934; 2936-2954; 2449-3001; 3000-3042; 3420-3435; 3451-3708; 3703-3754; 3750-3770; 3774-3840; 3840-3962; 3964-3978; 3974-3992; 3990-4157; 4153-4251; 4257-4282; 4284-4321; 4316-4333; 4337-4391; 4386-4400; 4398-4436; 4444-4547; 4572-4714; 4709-4777; 5165-5397; 5394-6582; 5578-5696; 5691-5709; 5708-5773; 5773-5816; 5818-5849; 5889-6045; 6042-6075; 6073-6108; 6113-6133; 6150-6296; 6292-6354; 6356-6555; 6555-6575; 6575-6616; 6620-6792; 6788-6917; 6913-7027; 7023-7061; 7056-7124; 7882-8000; 7998-8072; 8073-8098; 9000-9037; 9486-9502; 9743-9811; 9808-9831; 9829-9866; 9862-9986; 9983-10075; 10072-10091; 10091-10195; 10247-10263; 10262-10300; 10299-10448; 10448-10539; 10547-10564; 10580-10612; 10608-10708; 10703-10721; 10716-10750; 10749-10774; 10774-10800; and 10796-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

103. (Currently Amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 9 consecutive nucleotides selected from nucleotides 1-47; 47-124; 119-370; 364-395; 389-541; 537-647; ~~642-1005~~; 1000-1081; 1082-1110; 1105-1305; 1300-1367; 1362-1387; 1388-1515; 1515-1918; 1920-2011; 2050-2147; 2153-2210; 2233-2369; 2366-2423; 2419-2465; 2464-2492; 2487-2569; 2871-2935; 2935-3002; 2999-3043; 3419-3436; 3450-3755; 3749-3771; 3773-3841; 3839-3963; 3963-3979; 3973-3993; 3989-4158; 4152-4252; 4256-4283; 4283-4334; 4336-4401; 4397-4437; 4443-4548; 4571-4778; 5164-5398; 5393-5583; 5577-5710; 5707-5774; 5772-5817; 5817-5850; 5888-6046; 6041-6076; 6072-6109; 6112-6134; 6149-6355; 6355-6556; 6554-6576; 6574-6793; 6787-7125; 7881-8001; 7997-8073; 8072-8099; 8999-9038; 9485-9503; 9742-9812; 9807-9832; 9828-9867; 9861-9987; 9982-10076; 10071-10092; 10090-10196; 10246-10264; 10261-10301; 10298-10449; 10447-10540; 10546-10565; 10579-10751; 10748-10775; 10773-10801; and 10795-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

104. (Currently amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 10 consecutive nucleotides selected from nucleotides 1-48; 46-125; ~~118-1006~~; 999-1082; 1081-1111; 1104-1306; 1299-1368; 1361-1388; 1387-1516; 1514-1919; 1919-2012; 2049-2148; 2152-2211; 2232-2370 2365-2424; 2418-2466; 2463-2493; 2486-2570; 2870-2936; 2934-3003; 2998-3044; 3418-3437; 3449-3772; 3772-3842; 3838-3964; 3962-3994; 3988-4284; 4282-4335; 4335-4402; 4396-4438; 4442-4549; 4570-4779; 5163-5711; 5706-5775; 5771-5818; 5816-5851; 5867-6047; 6040-6077; 6071-6110; 6111-6135; 6148-6356; 6354-6577; 6573-7126; 7880-8074; 8071-8100; 8998-9039; 9484-9504; 9741-9813; 9806-9833; 9827-9988; 9981-10093; 10089-10197; 10245-10265; 10260-10302; 10297-10450; 10446-10541; 10545-10566; 10578-10752; 10747-10776; and 10772-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

105. (Currently amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 11 consecutive nucleotides selected from nucleotides 1-49; ~~45-1389~~; 1386-1517; 1513-1920; 1918-2013; 2048-2149; 2151-2212; 2231-2371; 2364-2425; 2417-2467; 2462-2571; 2869-2937; 2933-3004; 2997-3045; 3417-3438; 3448-3773; 3771-3843; 3837-3965; 3961-3995; 3987-4285; 4281-4336; 4334-4403; 4395-4439;

4441-4550; 4569-4780; 5162-5712; 5705-5776; 5770-5819; 5815-5852; 5886-6111; 6100-6136; 6147-6357; 6353-6578; 6572-7127; 7879-8075; 8070-8101; 8997-9040; 9483-9505; 9740-10198; 10244-10266; 10257-10303; 10296-10451; 10445-10542; 10544-10567; 10577-10753; 10746-10777; and 10771-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

106. (Currently amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 12 consecutive nucleotides selected from nucleotides 1-50, ~~44-1390~~; 1385-1518; 1512-1921; 1917-2014; 2047-2150; 2150-2213; 2230-2372; 2363-2468; 2461-2572; 2868-2938; 2932-3005; 2996-3046; 3416-3439; 3447-3774; 3770-3844; 3836-3966; 3960-4286; 4280-4337; 4333-4440; 4440-4551; 4568-4781; 5161-5713; 5704-5777; 5669-5820; 5814-5853; 5885-6112; 6109-6137; 6146-6358; 6352-6579; 6571-7128; 7315-7511; 7878-8076; 8069-8102; 8996-9041; 9482-9506; 9739-10199; 10243-10267; 10256-10304; 10295-10452; 10444-10543; 10543-10566; 10576-10754; 10745-10778; and 10770-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

107. (Currently Amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 13 consecutive nucleotides selected from nucleotides 1-51; ~~43-1391~~; 1384-1519; 1511-1922; 1916-2015; 2046-2151; 2149-2214; 2229-2469; 2460-2573; 2867-2939; 2931-3047; 3415-3440; 3446-3775; 3769-3845; 3835-3967; 3959-4287; 4279-4338; 4332-4441; 4439-4552; 4567-4782; 5160-5778; 5668-5821; 5813-5854; 5884-6113; 6108-6138; 6145-6359; 6351-6580; 6570-7129; 7877-8077; 8068-8103; 8995-9042; 9481-9507; 9738-10200; 10242-10453; 10443-10544; 10542-10567; 10575-10779; and 10769-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

108. (Currently Amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 14 consecutive nucleotides selected from nucleotides 1-52; ~~42-1392~~; 1383-1520; 1510-1923; 1915-2016; 2045-2152; 2148-2215; 2228-2574; 2866-2940; 2930-3048; 3414-3441; 3445-3776; 3768-3968; 3959-4288; 4278-4339; 4331-4442; 4438-4553; 4566-4783; 5159-5822; 5812-5855; 5883-6114; 6107-6139; 6144-6360; 6350-6581; 6569-7130; 7876-8078; 8067-8104; 8994-9043; 9480-9508; 9737-10201; 10241-10454; 10442-10545; 10541-10568; and 10574-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

109. (Currently Amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 15 consecutive nucleotides selected from nucleotides 1-53; ~~41-1393~~; 1382-1521; 1509-1924; 1914-2017; 2044-2153; 2147-2216; 2227-2575; 2865-2942; 2929-3049; 3413-3442; 3444-3777; 3767-3969; 3958-4289; 4277-4340; 4330-4443; 4437-4554; 4565-4784; 5158-5823; 5811-5856; 5882-6115; 6106-6140; 6143-6361; 6349-7131; 7875-8105; 8993-9044; 9479-9509; 9736-10202; 10240-10546; 10540-10569; and 10573-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

110. (Currently Amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 16 consecutive nucleotides selected from nucleotides ~~1-1394~~; 1381-1925; 1913-2018; 2043-2154; 2146-2217; 2226-2576; 2864-3050; 3412-3443; 3443-3778; 3766-4341; 4329-4444; 4436-4555; 4564-4785; 5157-5857; 5881-6116; 6105-6141; 6142-7132; 7874-8106; 8992-9045; 9478-9510; 9735-10203; 10239-10547; 10539-10570; and 10572-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

111. (Currently Amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 17 consecutive nucleotides selected from nucleotides ~~1-1926~~; 1912-2019; 2042-2155; 2145-2218; 2225-2577; 2863-3051; 3411-3779; 3765-4342; 4329-4445; 4435-4556; 4563-4786; 5156-5858; 5880-6117; 6104-6142; 6141-7133; 7873-8107; 8991-9046; 9477-9511; 9734-10204; 10238-10548; 10538-10571; and 10571-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

112. (Currently Amended) The plasmid of Claim 102, wherein the coding sequence consists of at least 18 consecutive nucleotides selected from nucleotides ~~1-2020~~; 2041-2156; 2144-2219; 2224-2578; 2862-3052; 3410-3780; 3764-4446; 4434-4557; 4562-4787; 5155-5859; 5879-6118; 6103-6143; 6140-7134; 7872-8108; 8990-9047; 9476-9512; 9733-10205; 10237-10549; 10537-10572; and 10570-10825 of SEQ ID NO: 3 ~~1, 3, 5 or 7~~ or the complement of SEQ ID NO: 3 ~~1, 3, 5 or 7~~.

113.-123. (Canceled).

124. (Previously presented) A cell comprising the expression plasmid of Claim 93 or 98.

125. (Previously presented) The cell of Claim 124 wherein said cell is a prokaryotic cell.
126. (Previously presented) The cell of Claim 125 wherein said prokaryotic cell is a *Escherichia coli* cell.
127. (Previously presented) The cell of Claim 124 wherein the cell is a eukaryotic cell.
128. (Previously presented) The cell of Claim 127 wherein the eukaryotic cell is a yeast cell.
129. (Previously presented) The cell of Claim 127 wherein the eukaryotic cell is an insect cell.
130. (Previously presented) The cell of Claim 127 wherein the eukaryotic cell is a vertebrate cell.
131. (Previously presented) The cell of Claim 130 wherein the vertebrate cell is a mammalian cell.
132. (Previously presented) The cell of Claim 131 wherein the mammalian cell is a rodent cell.
133. (Previously presented) The cell of Claim 132 wherein the rodent cell is a mouse cell.
134. (Previously presented) The cell of Claim 132 wherein the rodent cell is a rat cell.
135. (Previously presented) The cell of Claim 131 wherein the mammalian cell is a primate cell.

136. (Currently Amended) The cell of Claim 135 wherein the primate cell is ~~a monkey cell~~ a VERO cell.

137. (Previously presented) The cell of Claim 135 wherein the primate cell is a human cell.